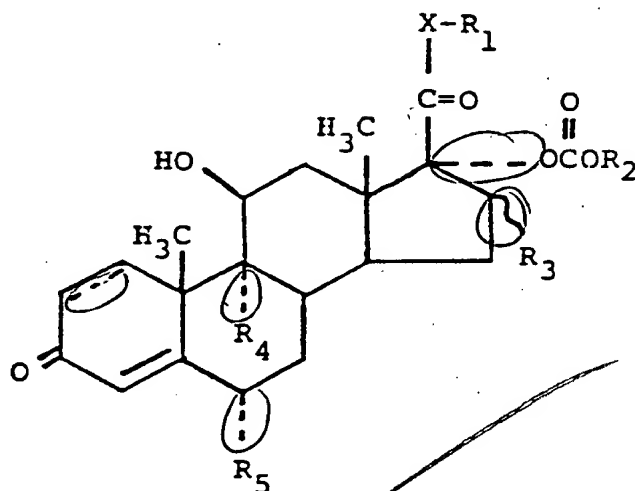


CM

WHAT IS CLAIMED IS:

1. A compound selected from the group consisting of:

PO (a) a compound of the formula



PO+10 wherein:

P1 R₁ is C₁₋₁₀ alkyl; C₂₋₁₀ (monohydroxy or polyhydroxy)alkyl; C₁₋₁₀ (monohalo or polyhalo)alkyl; or -CH₂COOR₆ wherein R₆ is unsubstituted or substituted C₁₋₁₀ alkyl; C₃₋₈ cycloalkyl, C₃₋₈ cycloalkenyl or C₂₋₁₀ alkenyl, the substituents being selected from the group consisting of halo, lower alkoxy, lower alkylthio, lower alkylsulfinyl, lower alkylsulfonyl,

T1231X

-NHC(=O)-(C₁₋₁₀ alkyl) and -OC(=O)-(C₁₋₁₀ alkyl), or R₆ is unsubstituted or substituted phenyl or benzyl, the substituents being selected from the group consisting of lower alkyl, lower alkoxy, halo, carbamoyl, lower alkoxycarbonyl, lower alkanoyloxy, lower haloalkyl, mono(lower alkyl)amino, di(lower alkyl)amino, mono(lower alkyl)carbamoyl, di(lower alkyl)carbamoyl, lower alkylthio, lower alkylsulfinyl and lower

123

alkylsulfonyl; or R_1 is $\text{CH}_2\text{CONR}_7\text{R}_8$ wherein R_7 and R_8 , which can be the same or different, are each hydrogen, lower alkyl, $\text{C}_3\text{-C}_8$ cycloalkyl, phenyl or benzyl, or R_7 and R_8 are combined such that NR_7R_8 represents the

5 residue of a saturated monocyclic secondary amine; or R_1 is unsubstituted or substituted phenyl or benzyl, the substituents being selected from the group of phenyl and benzyl substituents defined hereinabove with respect to R_6 ; or R_1 is $\text{CH-Y-(lower alkyl)}$ ^{P1+10} wherein Y is S , SO , SO_2 or O and R_9 is hydrogen, lower alkyl or phenyl, or R_9 and the lower alkyl group adjacent to Y are combined

10 so that R_1 is a cyclic system of the type CH-Y _{alkylene} ^{T1241X}

^{P1+10} wherein Y is defined as above and the alkylene group contains 3 to 10 carbon atoms, of which at least 3 and no more than 6 are ring atoms; or R_1 is CH-OCR_6 ^{P1+10} wherein R_6 is defined as hereinabove and R_{10} is hydrogen, lower alkyl, phenyl or halophenyl;

^{P1} R_2 is unsubstituted or substituted $\text{C}_1\text{-C}_{10}$ alkyl, $\text{C}_3\text{-C}_8$ cycloalkyl, $\text{C}_3\text{-C}_8$ cycloalkenyl or $\text{C}_2\text{-C}_{10}$ alkenyl, 20 the substituents being selected from the group consisting of halo, lower alkoxy, lower alkylthio, lower alkylsulfinyl, lower alkylsulfonyl, -NHC- ($\text{C}_1\text{-C}_{10}$ alkyl)

^{T1243X} and -OC- ($\text{C}_1\text{-C}_{10}$ alkyl), ^{P1+10} (or R_2 is unsubstituted or substituted phenyl or benzyl, the substituents being 25 selected from the group consisting of lower alkyl, lower alkoxy, halo, carbamoyl, lower alkoxy carbonyl, lower alkanoyloxy, lower haloalkyl, mono(lower alkyl)amino, di(lower alkyl)amino, mono(lower alkyl)carbamoyl, di(lower alkyl)carbamoyl, lower alkylthio, lower 30 alkylsulfinyl and lower alkylsulfonyl;

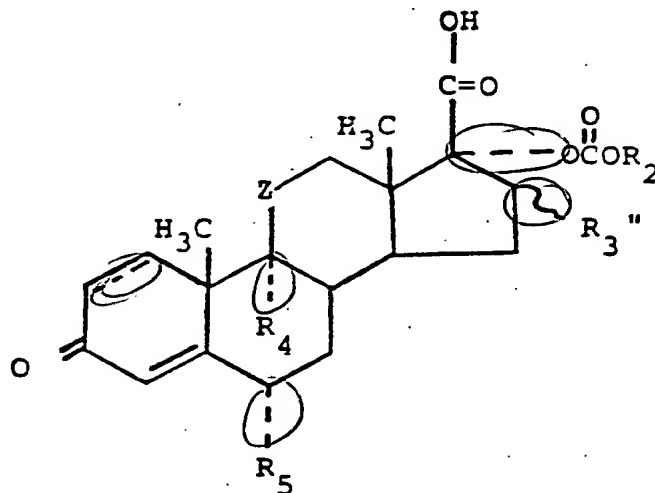
^{T1244X} ^{P1} R_3 is hydrogen, α -hydroxy, β -hydroxy, α -methyl, β -methyl, $=\text{CH}_2$, or α - or β - OCOR_2 ^{P1+10} wherein R_2 is identical to R_2 as defined hereinabove;

^{P1} R_4 is hydrogen, fluoro or chloro;

P1 R_5 is hydrogen, fluoro, chloro or methyl;
L X is $-O-$ or $-S-$;
P1 and the dotted line in ring A indicates that the 1,2 linkage is saturated or unsaturated;

5 *PO* (b) a quaternary ammonium salt of a compound of formula (I) wherein at least one of R_1 and R_2 is a halo-substituted alkyl group;

PO (c) a compound of the formula

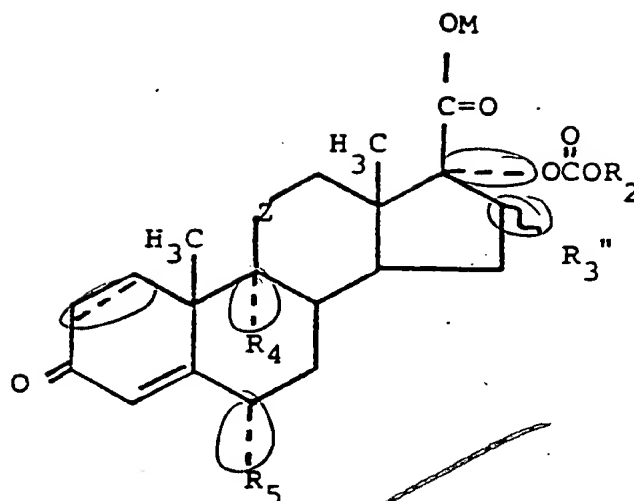


PO+1010 wherein R_2 , R_4 , R_5 , and the dotted line in ring A are as
62 defined in (a) above, Z is carbonyl or β -hydroxymethylene
60,62 and R_3'' is hydrogen, α -methyl, β -methyl, $=CH_2$ or α - or

T1251X β - $OCOR_2$ *PO+10* wherein R_2 is identical to R_2 above;

PO (d) a compound of the formula

T1260 X

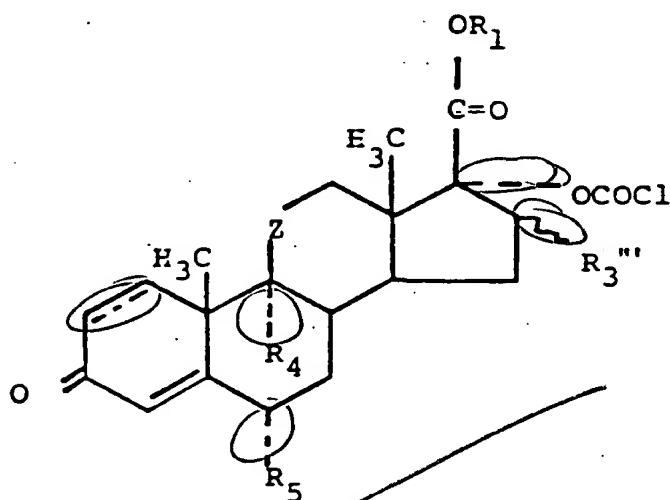


(IV)

P0+10 wherein M is alkali metal, thallium, alkaline earth metal/2 or NH₄ and R₂, R₃^{''}, R₄, R₅, Z and the dotted line in ring A are as defined in (a) and (c) above;

5 P0 (e) a compound of the formula

T1261 X

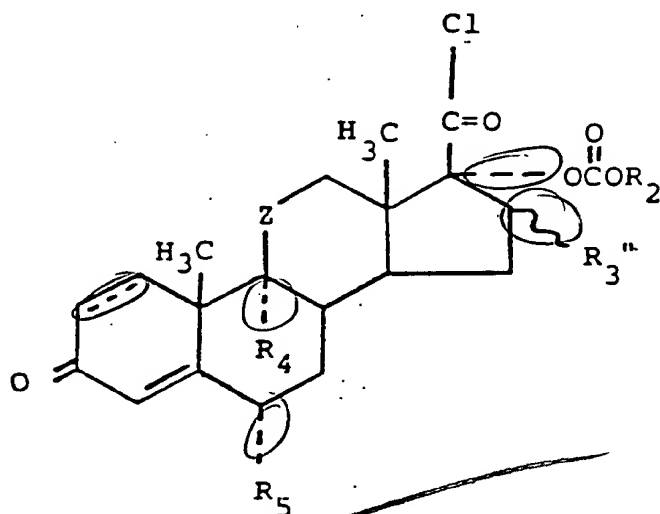


(VII)

PO+10 wherein R_3'' is hydrogen, α -methyl, β -methyl, α -OCOC1
 62 or β -OCOC1, and R_1 , R_4 , R_5 , Z and the dotted line in
 ring A are as defined in (a) and (c) above;

PO

(f) a compound of the formula

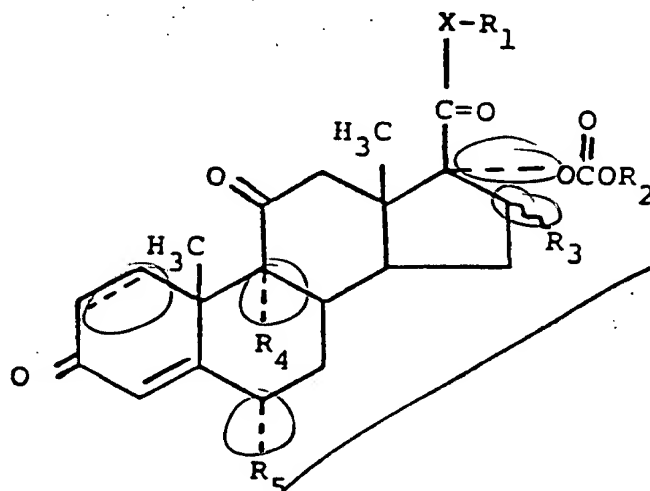


PO+10

wherein R_2 , R_3'' , R_4 , R_5 , Z and the dotted line in ring A
 are as defined in (a) and (c) above; and

PO

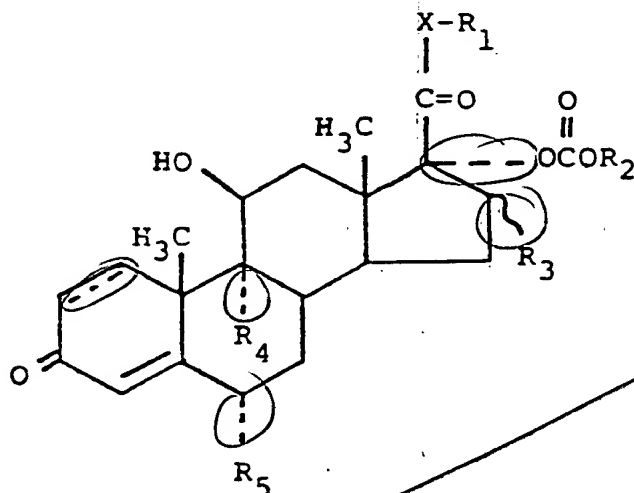
(g) a compound of the formula



P0+10 wherein $R_1, R_2, R_3, R_4, R_5, X$ and the dotted line in ring A are as defined in (a) above.

2. A compound selected from the group consisting of:

5 P0 (a) a compound of the formula



P0+10 wherein:

P1 R_1 is $C_{1/4}C_6$ alkyl; $C_{1/4}C_6$ (monohalo or polyhalo)alkyl; CH_2COOR_6 wherein R_6 is $C_{1/4}C_6$ alkyl;

10 $CH_2Y(C_{1/4}C_6$ alkyl) wherein Y is S , SO , SO_2 or O ; or CH_2OCR_6' wherein R_6' is $C_{1/4}C_6$ or phenyl;

P1 R_2 is C_1-C_6 alkyl, $C_{3/4}C_8$ cycloalkyl, phenyl, benzyl or C_1-C_6 (monohalo or polyhalo)alkyl;

P1 R_3 is hydrogen, α -hydroxy, α -methyl, β -methyl or $\alpha-OCOR_2$ (wherein R_2 is identical to R_2 as defined hereinabove);

P1 R_4 is hydrogen or fluoro;

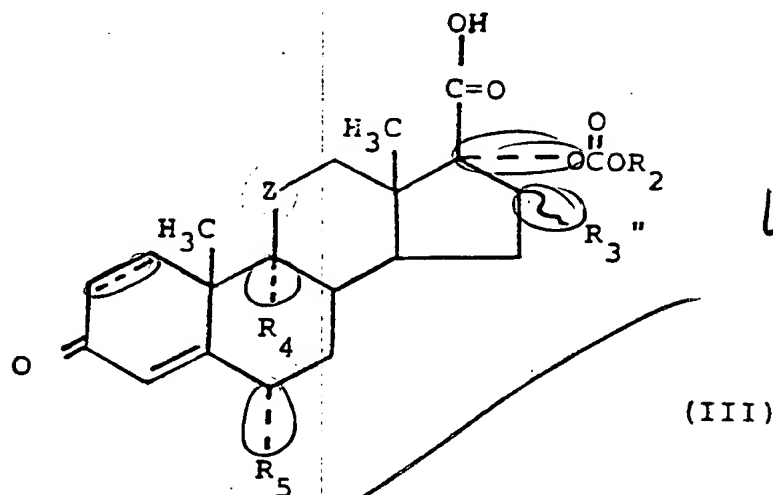
R_5 is hydrogen or fluoro;

X is O or S ;

20 L and the dotted line in ring A indicates that the 1,2-linkage is saturated or unsaturated;

PO (b) a quaternary ammonium salt of a compound of formula (I) wherein at least one of R_1 and R_2 is a halo-substituted alkyl group;

PO (c) a compound of the formula

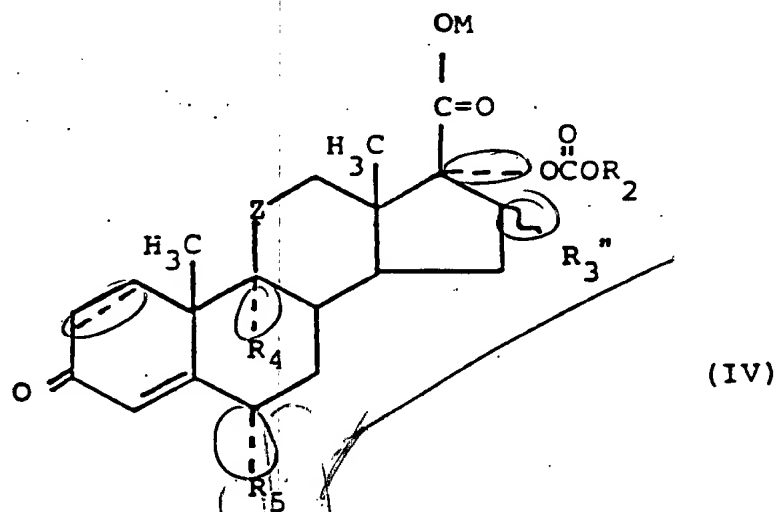


PO + 10 wherein R_2 , R_4 , R_5 and the dotted line in ring A are as defined in (a) above, Z is carbonyl or β -hydroxymethylene

60, 62 and R_3'' is hydrogen, α -methyl, β -methyl or α -OCOR₂ wherein R_2 is identical to R_2 above;

10

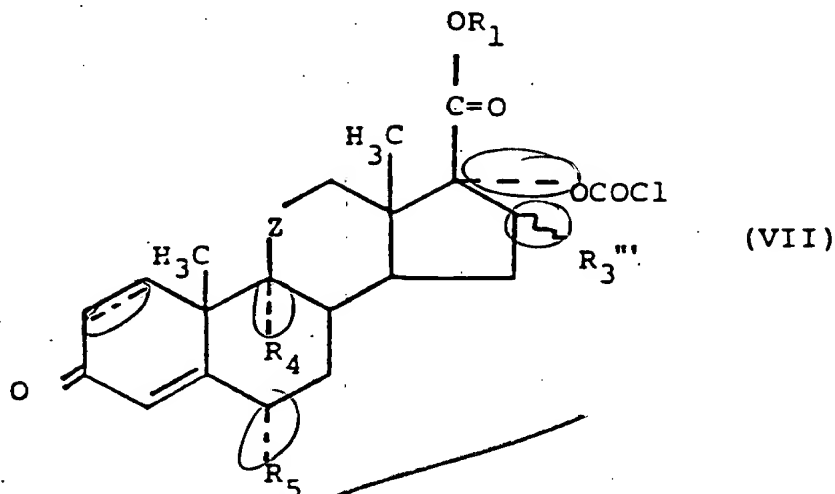
PO (d) a compound of the formula



PO+10 wherein M is alkali metal, thallium, alkaline earth metal/2 or NH_4 and R_2 , R_3'' , R_4 , R_5 , Z and the dotted line in ring A are as defined in (a) and (c) above;

PO

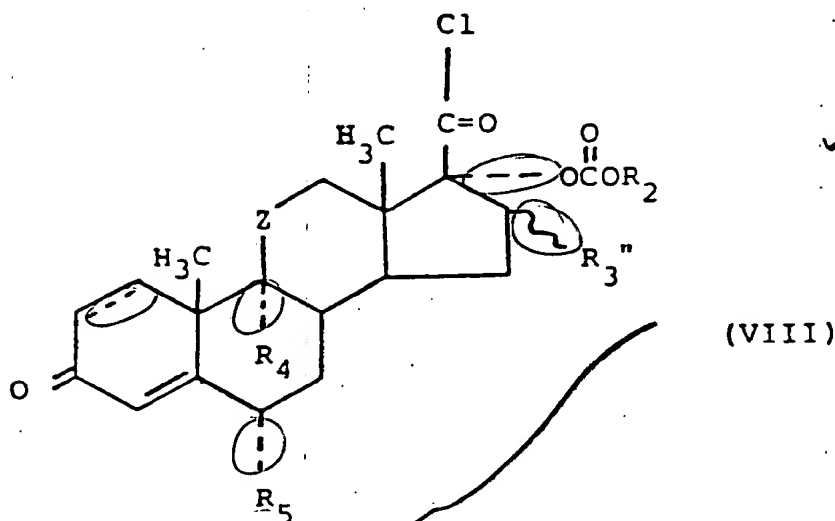
(e) a compound of the formula



PO+10 wherein R_3'' is hydrogen, α -methyl, β -methyl or α -OCOC1, and R_1 , R_4 , R_5 , Z and the dotted line in ring A are as defined in (a) and (c) above;

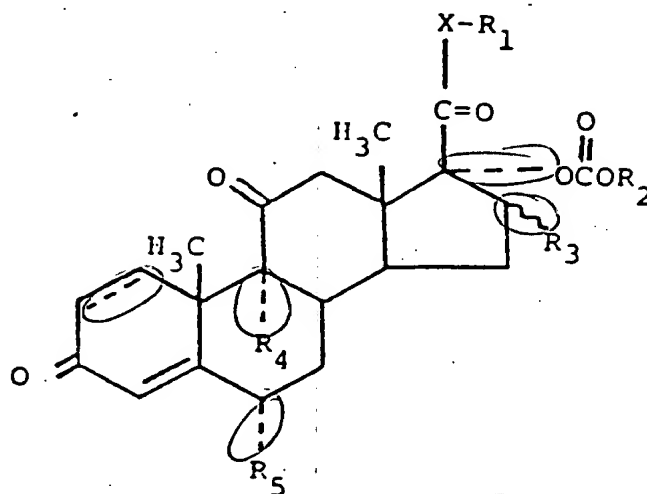
PO

(f) a compound of the formula



PO+10 wherein R_2 , R_3 , R_4 , R_5 , Z and the dotted line in ring A are as defined in (a) and (c) above; and

PO (g) a compound of the formula



PO+10 5 wherein R_1 , R_2 , R_3 , R_4 , R_5 , X and the dotted line in ring A are as defined in (a) above.

3. A compound of claim 1 or 2, said compound having the structural formula (I).

10 4. A compound of claim 1 or 2, said compound being a quaternary ammonium salt of a compound of formula (I) wherein at least one of R_1 and R_2 is a halo \ominus substituted alkyl group.

5. A compound of claim 1 or 2, said compound having the structural formula (III).

15 6. A compound of claim 1 or 2, said compound having the structural formula (IV).

7. A compound of claim 1 or 2, said compound having the structural formula (VII).

8. A compound of claim 1 or 2, said compound having the structural formula (VIII).

9. A compound of claim 1 or 2, said compound having the structural formula (IX).

5 10. A compound of claim 1, said compound having the structural formula (I) wherein R_3 is hydrogen, α -methyl, β -methyl, $\equiv\text{CH}_2$ or α - or β - $\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{OR}_2$. T 1320X

60,62

10 11. A compound of claim 1 or 2, said compound having the structural formula (I) wherein R_1 is $\text{C}_{1/4}^{\text{C}_6}$ alkyl.

12. A compound of claim 1 or 2, said compound having the structural formula (I) wherein R_1 is $\text{C}_{1/4}^{\text{C}_6}$ (monohalo or polyhalo)alkyl.

15 13. A compound of claim 12 wherein $\text{C}_{1/4}^{\text{C}_6}$ (monohalo or polyhalo)alkyl is $\text{C}_{1/4}^{\text{C}_6}$ monohaloalkyl.

14. A compound of claim 13 wherein $\text{C}_{1/4}^{\text{C}_6}$ monohaloalkyl is $\text{C}_{1/4}^{\text{C}_6}$ monochloroalkyl.

15. A compound of claim 14 wherein $\text{C}_{1/4}^{\text{C}_6}$ monochloroalkyl is chloromethyl.

20 16. A compound of claim 11 wherein R_2 is $\text{C}_{1/4}^{\text{C}_6}$ alkyl or $\text{C}_{1/4}^{\text{C}_6}$ monohaloalkyl.

17. A compound of claim 12 wherein R_2 is $\text{C}_{1/4}^{\text{C}_6}$ alkyl.

25 18. A compound of claim 13 wherein R_2 is $\text{C}_{1/4}^{\text{C}_6}$ alkyl.

19. A compound of claim 14 wherein R_2 is $C_{1/4}-C_6$ alkyl.

20. A compound of claim 15 wherein R_2 is $C_{1/4}-C_6$ alkyl.

5 21. A compound of claim 11 wherein R_2 is $C_{3/4}-C_8$ cycloalkyl, phenyl, benzyl or $C_{1/4}-C_6$ (monohalo or polyhalo)alkyl.

10 22. A compound of claim 12 wherein R_2 is $C_{3/4}-C_8$ cycloalkyl, phenyl, benzyl or $C_{1/4}-C_6$ (monohalo or polyhalo)alkyl.

23. A compound of claim 13 wherein R_2 is $C_{3/4}-C_8$ cycloalkyl, phenyl, benzyl or $C_{1/4}-C_6$ (monohalo or polyhalo)alkyl.

15 24. A compound of claim 14 wherein R_2 is $C_{3/4}-C_8$ cycloalkyl, phenyl, benzyl or $C_{1/4}-C_6$ (monohalo or polyhalo)alkyl.

25. A compound of claim 15 wherein R_2 is $C_{3/4}-C_8$ cycloalkyl, phenyl, benzyl or $C_{1/4}-C_6$ (monohalo or polyhalo)alkyl.

B 20 26. A compound of claim 1 or 2, said compound having the structural formula (I) wherein X is $\begin{smallmatrix} -O- \\ | \quad | \\ \text{3} \quad \text{3} \end{smallmatrix}$.

27. A compound of claim 12 wherein X is $\begin{smallmatrix} -O- \\ | \quad | \\ \text{3} \quad \text{3} \end{smallmatrix}$.

28. A compound of claim 13 wherein X is $\begin{smallmatrix} -O- \\ | \quad | \\ \text{3} \quad \text{3} \end{smallmatrix}$.

29. A compound of claim 14 wherein X is $\begin{smallmatrix} -O- \\ | \quad | \\ \text{3} \quad \text{3} \end{smallmatrix}$.

B 30. A compound of claim ¹⁷~~26~~ wherein R_4 and R_5 are hydrogen.

B 31. A compound of claim ¹⁸~~27~~ wherein R_4 and R_5 are hydrogen.

B 5 32. A compound of claim ¹⁹~~28~~ wherein R_4 and R_5 are hydrogen.

B 33. A compound of claim ²⁰~~29~~ wherein R_4 and R_5 are hydrogen.

B 10 34. A compound of claim ¹⁷~~26~~ wherein at least one of R_4 and R_5 is fluoro.

B 35. A compound of claim ¹⁸~~27~~ wherein at least one of R_4 and R_5 is fluoro.

B 36. A compound of claim ¹⁹~~28~~ wherein at least one of R_4 and R_5 is fluoro.

B 15 37. A compound of claim ²⁰~~29~~ wherein at least one of R_4 and R_5 is fluoro.

B 38. A compound of claim ¹⁷~~26~~ wherein R_4 is fluoro and R_5 is hydrogen.

B 20 39. A compound of claim ¹⁸~~27~~ wherein R_4 is fluoro and R_5 is hydrogen.

B 40. A compound of claim ¹⁹~~28~~ wherein R_4 is fluoro and R_5 is hydrogen.

B 41. A compound of claim ²⁰~~29~~ wherein R_4 is fluoro and R_5 is hydrogen.

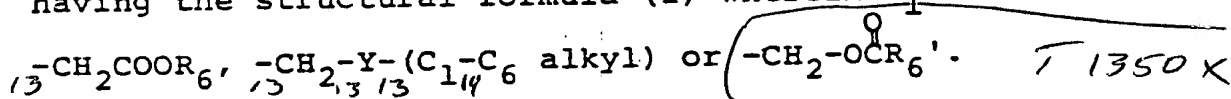
42. A compound of claim 35 wherein R_3 is
60,62 α -methyl or β -methyl.

43. A compound of claim 37 wherein R_3 is
60,62 α -methyl or β -methyl.

5 44. A compound of claim 39 wherein R_3 is
60,62 α -methyl or β -methyl.

60,62 45. A compound of claim 41 wherein R_3 is
 α -methyl or β -methyl.

46. A compound of claim 1 or 2, said compound
10 having the structural formula (I) wherein R_1 is



47. A compound of claim 1, said compound
having the structural formula (I) wherein R_1 is
 $\text{---CH}_2\text{CONR}_7\text{R}_8$.

15 48. A compound of claim 47 wherein at least
one of R_7 and R_8 is hydrogen or $\text{C}_{1\text{---}6}$ alkyl.

49. A compound of claim 47 wherein R_7 and R_8
are combined so that $\text{---NR}_7\text{R}_8$ represents the residue of a
saturated monocyclic secondary amine containing 5 to 7
20 carbon atoms.

50. A compound of claim 49 wherein $\text{---NR}_7\text{R}_8$
represents morpholino, 1-pyrrolidinyl, 4-benzyl-~~10~~
piperazinyl, perhydro-1,2,4-oxathiazin-4-yl, 1- or
4-piperazinyl, 4-methyl-1-piperazinyl, piperidino,
25 hexamethyleneimino, 4-phenylpiperidino, 2-methyl-~~10~~
pyrazolidinyl, 1- or 2-pyrazolidinyl, 3-methyl-~~10~~
imidazolidinyl, 1- or 3-imidazolidinyl, 4-benzylpiperidino
or 4-phenyl-1-piperazinyl.

135

51. A compound of Claim 1, said compound having the structural formula (I) wherein R_1 is $\text{-CH-Y-(lower alkyl)}$ wherein R_9 is hydrogen or methyl, or wherein R_9 and the lower alkyl group adjacent to Y are combined so that R_1 is -CH - Y wherein Y is -S- , -SO- , $\text{-SO}_2\text{-}$ or -O- and the alkylene group contains 3 to 10 carbon atoms, of which at least 3 and no more than 6 are ring atoms.

52. A compound of Claim 1 or 2, said compound having the structural formula (I) wherein the R_3 , R_4 and R_5 groupings and the 1,2-linkage are identical to those of a glucocorticosteroid selected from the group consisting of hydrocortisone and prednisolone.

53. A compound of Claim 1 or 2, said compound having the structural formula (I) wherein the R_3 , R_4 and R_5 groupings and the 1,2-linkage are identical to those of a glucocorticosteroid selected from the group consisting of fludrocortisone, betamethasone and dexamethasone.

54. A compound of Claim 1 or 2, said compound having the structural formula (I) wherein the R_3 , R_4 and R_5 groupings and the 1,2-linkage are identical to those of a glucocorticosteroid selected from the group consisting of flumethasone, fluprednisolone, methyl prednisolone and paramethasone.

55. A compound of Claim 1 or 2, said compound having the structural formula (I) wherein R_3 is $\alpha\text{-OCOR}_2$, and wherein the R_4 and R_5 groupings and the 1,2-linkage are identical to those of triamcinolone.

⁵²
56. A compound of claim 1 or 2, said compound having the structural formula (III) wherein Z is β -hydroxymethylene and R_2 is $C_{1/4}-C_6$ alkyl.

⁵³
57. A compound of claim 1 or 2, said compound having the structural formula (IV) wherein Z is β -hydroxymethylene and R_2 is $C_{1/4}-C_6$ alkyl.

⁵⁴
58. A compound of claim 1 or 2, said compound having the structural formula (VII) wherein Z is β -hydroxymethylene and R_1 is $C_{1/4}-C_6$ alkyl or $C_{1/4}-C_6$ monohaloalkyl.

⁵⁵
59. A compound of claim 1 or 2, said compound having the structural formula (VIII) wherein Z is β -hydroxymethylene and R_2 is $C_{1/4}-C_6$ alkyl.

⁵⁶
60. A compound of claim 1 or 2, said compound having the structural formula (IX) wherein R_1 is $C_{1/4}-C_6$ (monohalo or polyhalo)alkyl.

⁵⁷
61. A compound of claim 60 wherein $C_{1/4}-C_6$ (monohalo or polyhalo)alkyl is $C_{1/4}-C_6$ monohaloalkyl.

⁵⁸
62. A compound of claim 61 wherein R_2 is $C_{1/4}-C_6$ alkyl.

⁵⁹
63. A compound of claim 1 or 2, said compound having the structural formula (IX) wherein R_1 is $C_{1/4}-C_6$ alkyl or $C_{1/4}-C_6$ monohaloalkyl, R_2 is $C_{1/4}-C_6$ alkyl or $C_{1/4}-C_6$ monohaloalkyl and X is $\begin{smallmatrix} -O- \\ | \quad | \\ 13 \quad 13 \end{smallmatrix}$

64. A compound of Claim 63 wherein the R_3 , R_4 and R_5 groupings and the 1,2-linkage are identical to those of a glucocorticosteroid selected from the group consisting of cortisone, prednisone, chloroprednisone and meprednisone.

65. A compound of Claim 2, said compound having the structural formula (IX) wherein R_1 is C_{1-6} alkyl, $-CH_2COOR_6$, $-CH_2-Y-(C_{1-6}$ alkyl) or $-CH_2-O-C(=O)-R_6$.

10

62,60

66. The compound of Claim 2 which is chloromethyl 11 β -hydroxy-17 α -methoxycarbonyloxyandrost-4-en-3-one-17 β -carboxylate.

60,62

615

67. The compound of Claim 2 which is chloromethyl 17 α -ethoxycarbonyloxy-11 β -hydroxyandrost-4-en-3-one-17 β -carboxylate.

60,62

615

68. The compound of Claim 2 which is chloromethyl 17 α -butoxycarbonyloxy-11 β -hydroxyandrost-4-en-3-one-17 β -carboxylate.

62,60

20

69. The compound of Claim 2 which is chloromethyl 11 β -hydroxy-17 α -isopropoxycarbonyloxyandrost-4-en-3-one-17 β -carboxylate.

60,62

615

70. The compound of Claim 2 which is chloromethyl 17 α -ethoxycarbonyloxy-9 α -fluoro-11 β -hydroxy-16 β -methylandrosta-1,4-dien-3-one-17 β -carboxylate.

25

60,62

615

71. The compound of Claim 2 which is chloromethyl 9 α -fluoro-11 β -hydroxy-16 α -methyl-17 α -propoxycarbonyloxyandrosta-1,4-dien-3-one-17 β -carboxylate.

67

62, 60
L

72. The compound of claim 2 which is
1-chloroethyl 11 β -hydroxy-17 α -isopropoxycarbonyloxyan-
drost-4-en-3-one-17 β -carboxylate.

68

60, 62
L

5 73. The compound of claim 2 which is
1-chloroethyl 9 α -fluoro-11 β -hydroxy-17 α
isopropoxycarbonyloxy-16 β -methylandrosta-1,4-dien-3-
one-17 β -carboxylate.

69

60, 62
L10

74. The compound of claim 2 which is
chloromethyl 17 α -ethoxycarbonyloxy-11 β -hydroxyandrosta
1,4-dien-3-one-17 β -carboxylate.

70

62, 60
L

75. The compound of claim 2 which is
chloromethyl 11 β -hydroxy-17 α -isopropoxycarbonyloxyan-
drosta-1,4-dien-3-one-17 β -carboxylate.

71

60, 62 15
L

76. The compound of claim 2 which is
chloromethyl 17 α -ethoxycarbonyloxy-9 α -fluoro-11 β
hydroxyandrosta-1,4-dien-3-one-17 β -carboxylate.

72

60, 62
L L

77. The compound of claim 2 which is
chloromethyl 17 α -ethoxycarbonyloxy-9 α -fluoro-11 β
hydroxy-16 α -methylandrosta-1,4-dien-3-one-17 β -carboxylate.

73

20
60, 62
L
62

78. The compound of claim 2 which is
chloromethyl 9 α -fluoro-11 β -hydroxy-17 α
isopropoxycarbonyloxy-16 α -methylandrosta-1,4-dien-3-
one-17 β -carboxylate. ✓

74

60, 62 25
L

79. The compound of claim 2 which is
chloromethyl 9 α -fluoro-11 β -hydroxy-17 α
isopropoxycarbonyloxy-16 β -methylandrosta-1,4-dien-3-
one-17 β -carboxylate.

75

60,62
L L

~~80.~~ The compound of claim 2 which is
chloromethyl 9 α -fluoro-11 β -hydroxy-17 α -methoxycarbonyloxy-
16 α -methylandrosta-1,4-dien-3-one-17 β -carboxylate.

76

60,62
L 5

~~81.~~ The compound of claim 2 which is
chloromethyl 9 α -fluoro-11 β -hydroxy-16 α -methyl-17 α -
pentyloxycarbonyloxyandrosta-1,4-dien-3-one-17 β -
carboxylate.

77

60,62
L 16

~~82.~~ The compound of claim 2 which is
fluoromethyl 17 α -ethoxycarbonyloxy-9 α -fluoro-11 β -
hydroxy-16 α -methylandrosta-1,4-dien-3-one-17 β -carboxylate.

78

60,62
L L

~~83.~~ The compound of claim 2 which is methyl
17 α -(2-chloroethoxy)carbonyloxy-9 α -fluoro-11 β -hydroxy-
16 α -methylandrosta-1,4-dien-3-one-17 β -carboxylate.

79

60,62
L 15

~~84.~~ The compound of claim 2 which is
17 α -ethoxycarbonyloxy-9 α -fluoro-11 β -hydroxy-16 α -
methylandrosta-1,4-dien-3-one-17 β -carboxylic acid.

80

60,62
L

~~85.~~ The compound of claim 2 which is
9 α -fluoro-11 β -hydroxy-17 α -isopropoxycarbonyloxy-16 β -
methylandrosta-1,4-dien-3-one-17 β -carboxylic acid.

81

20
60,62
L

~~86.~~ The compound of claim 2 which is
9 α -fluoro-11 β -hydroxy-16 α -methyl-17 α -
propoxycarbonyloxyandrosta-1,4-dien-3-one-17 β -carboxylic
acid.

82

60,62
L 25

~~87.~~ The compound of claim 2 which is
9 α -fluoro-11 β -hydroxy-17 α -methoxycarbonyloxy-16 α -
methylandrosta-1,4-dien-3-one-17 β -carboxylic acid.

⁸³
~~88.~~ The compound of claim 2 which is
11 β -hydroxy-17 α -methoxycarbonyloxyandrost-4-en-3-one
17 β -carboxylic acid, 17 α -ethoxycarbonyloxy-11 β
hydroxyandrost-4-en-3-one-17 β -carboxylic acid,
17 α -butoxycarbonyloxy-11 β -hydroxyandrost-4-en-3-one
17 β -carboxylic acid, or 11 β -hydroxy-17 α
isopropoxycarbonyloxyandrost-4-en-3-one-17 β -carboxylic
acid.

⁸⁴
~~89.~~ The compound of claim 2 which is sodium
11 β -hydroxy-17 α -methoxycarbonyloxyandrost-4-en-3-one
17 β -carboxylate, sodium 17 α -ethoxycarbonyloxy-11 β
hydroxyandrost-4-en-3-one-17 β -carboxylate, sodium
17 α -butoxycarbonyloxy-11 β -hydroxyandrost-4-en-3-one
17 β -carboxylate, or sodium 11 β -hydroxy-17 α
isopropoxycarbonyloxyandrost-4-en-3-one-17 β -carboxylate.

⁸⁵
~~90.~~ The compound of claim 2 which is
chloromethyl 17 α -chlorocarbonyloxy-11 β -hydroxyandrost-4-en-3-one-17 β -carboxylate.

⁸⁶
~~91.~~ The compound of claim 2 which is
chloromethyl 17 α -ethoxycarbonyloxy-9 α -fluoro-16 α
methylandrosta-1,4-diene-3,11-dione-17 β -carboxylate. ✓

⁸⁷
~~92.~~ The compound of claim 2 which is
chloromethyl 9 α -fluoro-17 α -isopropoxycarbonyloxy-16 β
methylandrosta-1,4-diene-3,11-dione-17 β -carboxylate.

⁸⁸
~~93.~~ A pharmaceutical composition of matter
comprising an anti-inflammatory effective amount of a
compound of claim 1 or 2 having the structural formula (I),
in combination with a non-toxic pharmaceutically
acceptable carrier therefor suitable for topical or other
local application.

⁸⁹
94. A method for alleviating inflammation in or on a warm-blooded animal exhibiting a topical inflammatory response, which comprises topically administering thereto an anti-inflammatory effective amount of a composition of claim ⁸⁸93.

⁹⁰
95. A method for alleviating inflammation in or on a warm-blooded animal exhibiting a localized inflammatory response, which comprises locally administering thereto an anti-inflammatory effective amount of composition of claim ⁸⁸93.

⁹¹
96. A compound of claim 13 wherein C_{1-6} monohaloalkyl is C_{1-6} monofluoroalkyl.

⁹²
97. A compound of claim ⁹¹96 wherein C_{1-6} monofluoroalkyl is fluoromethyl.

⁹³
98. A compound of claim ⁹¹96 wherein R_2 is C_{1-6} alkyl.

⁹⁴
99. A compound of claim ⁹²97 wherein R_2 is C_{1-6} alkyl.

⁹⁵
100. A compound of claim ⁹¹96 wherein X is \overline{O} .

⁹⁶
101. A compound of claim ⁹⁵100 wherein R_4 and R_5 are hydrogen.

⁹⁷
102. A compound of claim ⁹⁶101 wherein R_3 is hydrogen.

⁹⁸
103. A compound of claim ⁹⁵100 wherein at least one of R₄ and R₅ is fluoro.

⁹⁹
104. A compound of claim ⁹⁵100 wherein R₄ is fluoro and R₅ is hydrogen.

5 ¹⁰⁰
105. A compound of claim ⁹⁹104 wherein R₃ is α -methyl or β -methyl.

¹⁰¹
62, 60 L 106. The compound of claim 2 which is fluoromethyl 11 β -hydroxy-17 α -isopropoxycarbonyloxyandrost-4-en-3-one-17 β -carboxylate.

¹⁰²
10 60, 62 L L 107. The compound of claim 2 which is fluoromethyl 17 α -ethoxycarbonyloxy-9 α -fluoro-11 β -hydroxy-16 α -methylandrosta-1,4-dien-3-one-17 β -carboxylate.

¹⁰³
60 62-15 108. The compound of claim 2 which is fluoromethyl 9 α -fluoro-11 β -hydroxy-16 α -methyl-17 α -n^opropoxycarbonyloxyandrosta-1,4-dien-3-one-17 β -carboxylate.

Add B'

Add C1